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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/033,598	12/27/2001	Arto Leppisaari	810-010779-US(PAR)	8819
2512	7590	05/13/2005	EXAMINER	
PERMAN & GREEN 425 POST ROAD FAIRFIELD, CT 06824			EWART, JAMES D	
			ART UNIT	PAPER NUMBER
			2683	

DATE MAILED: 05/13/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/033,598	Applicant(s) LEPPISAARI, ARTO	
	Examiner James D Ewart	Art Unit 2683	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE ____ MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
 - If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
 - If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
 - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-17 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-8, 10-12 and 14-17 is/are rejected.
- 7) ☐ Claim(s) 9 and 13 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date ____ | 6) <input type="checkbox"/> Other: ____ |

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Response to Arguments

1. Applicant's amendment of Column 0063 has overcome Examiner's objection of the specification. Therefore, Examiner has withdrawn the objection to the specification.
2. The Applicant's arguments regarding the prior art rejections, filed November 15, 2004, have been fully considered by the Examiner, and are deemed persuasive. However, Examiner has applied new art in place of Forssell et al.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-3,7,8, and 14-17 are rejected under 35 USC 103(a) as being unpatentable over Rosier (U.S. Patent Publication No. 2002/0080792) and further in view of Lohtia et al. (U.S. Patent Publication No. 2002/0082033).

Referring to claim 1, Rosier teaches a method for acknowledging reception of messages in a communications system (Figures 2-4), which messages are downlink messages transmitted from a communication network to a mobile station connected to said communication network (0005), wherein said method comprises: receiving at said mobile station at least two downlink messages from said communication network (Figures 2-4 and 0015), of which at least two

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downlink messages reception has to be acknowledged (Figures 2-4 and 0015); and acknowledging reception of said at least two downlink messages in a single uplink message transmitted by said mobile station to said communication network (Figures 2-4 and 0015), but does not teach acknowledging TBF messages. Lohtia et al teaches acknowledging TBF messages (0029). Therefore at the time the invention was made, it would have been obvious to a person of ordinary skill in the art to combine the art of Rosier with the teaching of Lohtia et al of acknowledging TBF messages to enable the release of the TBF (0029)

Referring to claim 2, Lohtia et al further teaches wherein communication network comprises a GSM/EDGE (Global system for mobile communications/enhanced data rates for GSM evolution) radio access network (GERAN) via which said mobile station is connected to said communication network (0006 and 0007) .

Referring to claim 3, Lohtia et al further wherein said at least two downlink messages are control messages transmitted in at least two downlink temporary block flows (TBF) associated to said mobile station (0024). Examiner equates signaling with control.

Referring to claim 7, Rosier further teaches wherein said uplink message acknowledging reception of said at least two downlink messages comprises an identification of each of said at least two downlink messages (Figures 2-4 and 0097). Each bit of the acknowledgement identifies a sequence number of a PDU.

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Referring to claim 8, Lohtia et al further teaches wherein said at least two downlink messages are control messages transmitted in at least two downlink temporary block flows (TBF) (0024; Examiner equates signaling with control), and identification comprises at least a temporary block flow identifier (TFI) assigned to each TBF (0034).

Referring to claim 14, Rosier teaches a mobile station comprising means for combining acknowledgements for at least two downlink messages (0015 and Figures 2-4; PDU's) received from a communication network to which mobile station is connected, which messages were transmitted by said communication network to said mobile station (0005), into a single uplink message to communication network (Figures 2-4; acknowledgement), but does not teach downlink messages are control messages of a temporary block flow. Lohtia et al teaches downlink messages are control messages of a temporary block flow (0024). Therefore at the time the invention was made, it would have been obvious to a person of ordinary skill in the art to combine the art of Rosier with the teaching of Lohtia et al wherein downlink messages are control messages of a temporary block flow to communicate signaling between the mobile station and the base station (0029)

Referring to claim 15, Rosier teaches a communication network comprising means for transmitting downlink messages to a mobile station connected to said communication network (0005) in at least two downlink messages associated to said mobile station (Figures 2-4; PDU's) and means for acknowledging at least two uplink messages transmitted to said mobile station with a single uplink message (Figures 2-4; acknowledgement), but does not teach

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downlink messages are control messages of a temporary block flow and requesting an acknowledgement. Lohtia et al teaches downlink messages are control messages of a temporary block flow (0024) and requesting an acknowledgement (0029, FBI set to one). Therefore at the time the invention was made, it would have been obvious to a person of ordinary skill in the art to combine the art of Rosier with the teaching of Lohtia et al wherein downlink messages are control messages of a temporary block flow and requesting an acknowledgement to communicate signaling between the mobile station and the base station (0029).

Referring to claim 16, Lohtia et al further teaches comprising at least a GERAN and a 3G core network, said GERAN providing access for mobile stations to said 3G core network (0006 and 0007).

Referring to claim 17, Rosier teaches a communication system comprising: a communication network with means for transmitting downlink messages (Figures 2-4; PDU's) to a mobile station connected to said communication network (0005) and means for acknowledging at least two messages transmitted to said mobile station with a single uplink message (0015) and a mobile station with means for combining acknowledgements for at least two downlink messages received from communication network into a single uplink message to said communication network (Figures 2-4; acknowledgement) but does not teach downlink messages are control messages of a temporary block flow and requesting an acknowledgement. Lohtia et al teaches downlink messages are control messages of a temporary block flow (0024) and requesting an acknowledgement (0029, FBI set to one). Therefore at the time the invention was

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made, it would have been obvious to a person of ordinary skill in the art to combine the art of Rosier with the teaching of Lohtia et al wherein downlink messages are control messages of a temporary block flow and requesting an acknowledgement to communicate signaling between the mobile station and the base station (0029).

4. Claims 4, 10 and 11 are rejected under 35 USC 103(a) as being unpatentable over Rosier and Lohtia et al in view of Budka et al (U.S. Patent No. 6,856,812).

Referring to claim 4, Rosier teaches the limitations of claim 4, but does not teach wherein said uplink message is transmitted in an uplink control channel associated to a downlink temporary block flow (TBF), which downlink TBF is associated to said mobile station. Budka et al teaches wherein said uplink message is transmitted in an uplink control channel associated to a downlink temporary block flow (TBF), which downlink TBF is associated to said mobile station (Column 2, Lines 55-57; RLC/MAC acknowledgement messages). Therefore at the time the invention was made, it would have been obvious to a person of ordinary skill in the art to combine the art of Rosier with the teaching of Budka et al wherein said uplink message is transmitted in an uplink control channel associated to a downlink temporary block flow (TBF), which downlink TBF is associated to said mobile station to report downlink quality measurements (Column 2, Lines 55-56).

Referring to claim 10, Rosier teaches the limitations of claim 10, but does not teach wherein said uplink message is transmitted using a radio link control/medium access control (RLC/MAC) control block format. Budka et al teaches wherein said uplink message is

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transmitted using a radio link control/medium access control (RLC/MAC) control block format (Column 2, Lines 51-58). Therefore at the time the invention was made, it would have been obvious to a person of ordinary skill in the art to combine the art of Rosier with the teaching of Budka et al wherein said uplink message is transmitted using a radio link control/medium access control (RLC/MAC) control block format to report downlink quality measurements (Column 2, Lines 55-56).

Referring to claim 11, Budka et al further teaches wherein said RLC/MAC control block format for acknowledgement messages (Column 2, Lines 51-58) and Rosier teaches provides at least two identification fields wherein at least two of said at least two identification fields identify a different one of said at least two downlink messages that are to be acknowledged by said single uplink message (Figures 2-4). Each bit of the acknowledgement identifies a sequence number of a PDU.

5. Claim 5 is rejected under 35 USC 103(a) as being unpatentable over Rosier and further in view of Pecen et al. (U.S. Patent No. 6,529,525).

Referring to claim 5, Rosier further teaches wherein said uplink message is transmitted as a single packet control acknowledgement (PCA) message on a reserved uplink control channel (Figures 2-4 the acknowledgement is sent on a control channel), but does not teach using a radio block of four consecutive time division multiple access (TDMA) frames of said control channel. Pecen et al. teaches using a radio block of four consecutive time division multiple access (TDMA) frames of said control channel (Column 4, Line 65 to Column 5, Line 2). Therefore at

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the time the invention was made, it would have been obvious to a person of ordinary skill in the art to combine the art of Forssell et al. and Rosier with the teaching of Pecen et al. of using a radio block of four consecutive time division multiple access (TDMA) frames of said control channel to be in accord with GSM/EDGE specifications (Column 3, Lines 56-65).

6. Claim 6 is rejected under 35 USC 103(a) as being unpatentable over Rosier and further in view of Oksala et al. (U.S. Patent No. 6,694,135).

Referring to claim 6, Rosier teaches the limitations of claim 6, but does not teach identifying a radio block that is to be employed for acknowledging reception. Oksala et al. teaches identifying a radio block that is to be employed for acknowledging reception (Column 2, Lines 16-22 and Column 4, Lines 19-23). Therefore at the time the invention was made, it would have been obvious to a person of ordinary skill in the art to combine the art of Forssell et al. and Rosier with the teaching of Oksala et al. of identifying a radio block that is to be employed for acknowledging reception to improve the efficiency of the use of the uplink resources (Column 3, Lines 19-20).

7. Claim 12 is rejected under 35 USC 103(a) as being unpatentable over Rosier and further in view of Chang et al. (U.S. Patent Publication No. 2001/0040883).

Referring to claim 12, Rosier teaches the limitations of claim 12, but does not teach wherein said uplink message is transmitted using an access burst format. Chang et al. teaches

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wherein said uplink message is transmitted using an access burst format (0191). Therefore, at the time the invention was made, it would have been obvious to a person of ordinary skill in the art to combine the art of Forssell et al. and Rosier with the teaching of Chang et al. to provide dynamic assignment of uplink and downlink channels (0009).

Allowable Subject Matter

8. Claims 9 and 13 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. The following is a statement of reasons for the indication of allowable subject matter:

Referring to claim 9, the references cited teach wherein said at least two downlink messages are control messages transmitted in at least two downlink temporary block flows (TBF) (Figure 4; 436), and wherein said identification comprises a TFI, but does not teach indicating a timeslot number of a predetermined timeslot of each TBF.

Referring to claim 13, the references cited do not teach a method for acknowledging reception of messages in a communications system wherein a single uplink message is transmitted to acknowledge multiple downlink messages ***wherein each acknowledgment of reception of up to four downlink messages is included in a different one of said bursts in said four consecutive frames.***

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Conclusion

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to James D Ewart whose telephone number is (571) 272-7864. The examiner can normally be reached on M-F 7am - 4pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, William Trost can be reached on (571)272-7872. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9306 for regular communications and (703) 872-9306 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703)305-3900.

Ewart
May 3, 2005



**WILLIAM TROST
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